

ABSTRACT

A full color video projector system using a light source and a single light valve. The output of the light source passes through a condenser lens. The lens is directed toward a splayed array of red, green, and blue dichroic reflector color filters. The reflected three primary color beams first pass through a lenticular lens array, comprised of a plurality of elongated cylinder lenses, arranged in parallel, co-planar relation. The lenticular array produces color stripe illumination pattern, which is redirected and focused by a relay optic upon a reflective micro-mirror light valve. The light valve includes three sub-pixels for every full-color screen pixel. The pixels are arranged in parallel stripes which correspond to the size and configuration of the color stripe illumination pattern outputted by the lenticular array. Light valve address circuitry actuates appropriate sub-pixels to reflect incident light energy, in accordance with corresponding video image information. The light energy reflected by the light valve is directed to a projection lens, and focused upon a screen.